REMARKS

Claims 1-16 are pending in the present application.

By the present amendment, Claims 1, 2, 4, 6, and 10 have been amended to overcome the Examiner's formality rejections imposed under 35 U.S.C. §112, Second Paragraph. Applicants note that these amendments have not been made in response to a prior art rejection imposed by the Examiner.

No new matter has been added.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 1-13 as being indefinite. Specifically, the Examiner rejected claims 1, 2, 4, 6, and 10 as being indefinite because these claims recite varying broad ranges as well as preferably narrower ranges. By the present amendment, Applicants have deleted each occurrence of the "preferably" clauses from the pending claims.

Accordingly, in view of the above amendments and remarks, reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph are respectfully requested.

Rejections Under 35 U.S.C. §103

The Examiner has rejected claims 1, 2, and 10-16 under 35 U.S.C. §103 as being unpatentable over Edstrom, U.S. Patent No. 5,546,715 ("Edstrom") in view of a year 2000 web brochure for Buell Door ("Buell").

Edstrom fairly discloses a door frame in which the jambs and lintels appear to have been made from high-grade lumber. (Col. 1, lines 35-39). In particular, the jamb component of the door frame is made by applying a veneer of high-grade lumber to a wood core, which is preferably made of low grade lumber. (Col. 2, lines 42-56).

Buell discloses a door with a stile and rail construction, with several different rail and stile dimensions as well as material and construction types.

Out of the claims rejected only claims 1, 10, and 14 are independent.

Claim 1 (as presently amended), recites:

A laminated wood piece comprising: (a) a solid hardwood component having an upper surface and a lower surface that are substantially parallel to each other; and (b) a wood composite component having layers oriented substantially parallel to the lower surface of the solid hardwood component; wherein the ratio of a thickness of the solid hardwood component to a thickness of the wood composite component is from about 1:1 to about 1:10. (Emphasis added)

Claim 10 (as presently amended) recites:

A door including a frame, the frame including at least one stile member, the stile member comprising: (a) a solid hardwood component having an upper surface and a lower surface that are substantially parallel to each other; and (b) a wood composite component having layers oriented substantially parallel to the upper surface of the solid hardwood component; wherein the ratio of a thickness of the solid hardwood component to a thickness of the wood composite component is from about 1:1 to about 1:10. (Emphasis added)

Claim 14 recites:

A method for manufacturing a door comprising the steps of:
providing a core; providing a door stile comprising: (a) a solid hardwood component having an upper surface and a lower surface that are substantially parallel to each other; and (b) a wood composite component attached to the solid hardwood component, the wood composite component having layers oriented substantially parallel to the lower surface of the solid hardwood component; and securing the door stile to the core, with the wood composite component contacting the core, and the solid hardwood component being on the outer side of the wood composite component. (Emphasis added)

The combination of Edstrom and Buell does not disclose a laminated wood piece comprising a wood composite component, in which the wood composite component has layers. Because an obviousness rejection under 35 U.S.C. §103 requires that the references, as modified or combined must teach or suggest all of the elements of the claims, (M.P.E.P. §2143), the instant claims are clearly allowable.

On page 3 of the Office Action mailed March 19 the Examiner argues that Edstrom teaches a laminated wood piece having a solid hardwood component (a veneer piece,

5d) and having an upper surface and a lower surface that are substantially parallel to each other and a wood composite component having layers oriented substantially parallel to the lower surface of the solid hardwood component. The Examiner concedes that Edstrom fails to disclose the specific dimensions and proportions of the present invention, but applies the Buell reference to disclose thicknesses of the solid hardwood component to the thickness of the wood composite component that purportedly overlap the thickness ratios of the solid hardwood component to the wood composite component recited in present claims 1, 10, and 14. Applicants respectfully disagree with this reasoning.

Specifically, Applicants maintain that the Examiner has misinterpreted the Edstrom reference by asserting that the Edstrom reference discloses a wood composite material having multiple layers. Contrary to the Examiner's interpretation, Edstrom makes no mention of wood composite materials nor the presence of multiple wood layers.

Before discussing the Edstrom reference, Applicants wish to clarify what is meant by "wood composite" as recited in the present claims. The specification of the instant application defines "wood composite material" as "a composite material that comprises wood and one or more other additives, such as adhesives or waxes." (Paragraph 0022) Such wood composite materials are typically present in the form of multiple layers, (Paragraph 0025), and in an OSB preferred embodiment, these layers are composed of strands cut from wood lumber. (Paragraphs 0029-0031).

Edstrom does not teach the use of a wood composite material nor does Edstrom mention the presence of layers of wood composite material. In fact, the Edstrom reference mentions the word "composite" only once, in the following passage:

> Moreover, because of this special form of tongue-and-groove joint, the back of the composite jamb will be precisely planar, and the flanges will be located accurately relative to the rib. (Col. 4, lines 30-34, Emphasis added.)

This usage in Edstrom of the word "composite" has nothing to do with a wood composite material as recited in the present claims. Rather, Edstrom is using "composite" to describe a door jamb being constructed from several different pieces attached together (see, e.g.,

Fig. 2, where the jamb is constructed from at least four different pieces -- items 5a-5d.). Edstrom uses "composite" in the sense that many separate pieces were brought together and attached to each other to make the jamb. Edstrom does not characterize the wood material itself as a composite material.

Edstrom also fails to disclose a wood material present in the form of multiple layers. Indeed, the word "layer" appears only once in the entire Edstrom text, as follows:

> The face of the rib component is then veneered by bonding to it a layer of veneer 5d shown in FIGS. 2, 3 and 4. (Col. 2, lines 49-56, emphasis added).

This veneer is composed of solid hardwood and has nothing to do with a wood composite material.

In addition to the omission of any teachings relating to wood composite materials or wood composite materials present in one or more layers, Edstrom explicitly teaches the use of wood materials quite different from the wood composite material recited in the present claims. Specifically, Edstrom consistently makes mention of only two types of material: high-grade and low-grade lumber. To a person of ordinary skill in the art, "lumber" means natural solid wood lumber that is derived from harvested timber wood. This lumber is a minimally processed piece of wood, i.e., the immediate product of a harvested log, and is thus, the very antithesis of the extensively processed wood composite material that composes the presently claimed laminated wood piece.

In fact, the detailed top perspective view shown in Figure 4 makes it clear that the material here forming item 5a is solid wood, not a wood composite material. In the detailed view of figure 4, item 5a clearly has the appearance of solid wood rather than a wood composite material.

It appears that the basis for the Examiner's misinterpretation of the Edstrom references is that the Examiner has misunderstood the distinction between "grains" and "layers". In the portion of the March 19 Office Action text that brides pages 3-4, the Examiner writes:

> The patent to Edstrom discloses a laminated wood piece having a solid hardwood component (5d) having an upper surface and a lower surface

> that are substantially parallel to each other and a wood composite component (5a) having layers oriented substantially parallel to the lower surface of the solid hardwood component. It is evident from Fig. 2, that the lower grade wood [(5a)] has its grain running substantially parallel to the hardwood veneer layers of 5d. (Emphasis added).

The Examiner has identified a grain in the lower grade wood component; the Examiner has previously identified this lower grade wood component as being made from a wood composite material. However, if the lower grade wood (item 5a) was indeed made from a wood composite material arranged in layers oriented substantially parallel to the lower surface of the solid hardwood component, as alleged by the Examiner, then a wood grain would not be visible in item 5a in the transverse view shown in Figure 2. Rather, what would be visible in figure 2 would be the layers themselves.

As for Buell and its teachings or a wood composite material, the Examiner has not asserted that Buell teaches the presence of a wood composite material, nor the presence of multiple layered wood material. And indeed Buell does not explicitly teach any sort of wood composite material.

Further, even if the Edstrom and Buell references disclosed all of the elements of the present claims, which as Applicants have shown above, they do not, the Examiner has not identified any teaching or suggestion that would have motivated a person of ordinary skill to modify the jamb disclosed in the Edstrom reference by using the stile and door frame proportions disclosed in Buell. In order to combine two prior art references, the Examiner must identify a teaching in the prior art that would suggest the desirability of the combination. (M.P.E.P. §2143).

As summarized above, Edstrom is directed to a door frame, and particularly to the jamb component of the door frame while Buell is directed to a door and particularly to the stile component of the door. The jamb component and the stile component are each entirely separate structural members fulfilling entirely separate functional purposes, and have performance demands dramatically different from each other. Thus, in order to combine these disparate

references the Examiner would have to have highly material and direct teachings suggesting their combination.

The Examiner has not identified any such teaching or suggestion. As motivation to combine these references the Examiner asserts that a person of ordinary skill would have been motivated by the teachings of the Buell Brochure to have built the device of Edstrom within the dimensions described by Buell in order to reduce material costs. (Top, Page 5) This proposed motivation is flawed for the reasons that follow.

First, the Examiner relies heavily on the teachings of the Buell brochure, but this brochure does not really have any teachings, except to list several different door dimensions and styles. The Buell brochure isn't a manual for constructing composite door, it is rather an advertisement listing the various dimensions and styles in which the door product is available. Buell doesn't teach

Most importantly, Buell gives no indication that the door rail and door stile constructions it discloses could be used on the door jambs taught by Edstrom. Nor does either reference teach that by using the dimensions set forth in Buell, material costs could be reduced. It is this reduction of material costs that is the purported teaching or suggestion that the Examiner relies on for combining these references.

Second, and on a more fundamental level, the Examiner mentions using the teachings of the Buell to build the Edstrom device. But the Edstrom device is the jamb and lintel portions that frame a door frame, by contrast, the present claims are direct to a laminated wood piece, a method for making a laminated wood piece, and a door. None of the claimed processes or products has anything to do with the framing element for a door that is disclosed in Edstrom. Thus, the device that the Examiner has purportedly assembled from these very disparate prior art elements has no resemblance to the product and methods set forth in the present claims.

(Note that in their Application, the Applicants refer to the internal supporting structure of a door as a door frame, while Edstrom refers to the structure built around a door as a "frame" as well. Nonetheless, these are two entirely different structures.)

Therefore, based on the above remarks, the Examiner has failed to establish that claims 1, 2, and 10-16 are obvious in view of Edstrom and Buell. Reconsideration and withdrawal of the rejections of claims 1, 2, and 10-16 are respectfully requested.

The Examiner has rejected claims 3-9 under 35 U.S.C. §103 as being unpatentable over Edstrom, Buell and U.S. Patent Application 2003/0008110 A1 to Hsu ("Hsu").

Hsu fairly discloses a method for forming a multi-layer lignocellulosic, resin-containing mat that has an increased resistant to the effect of edge and differential thickness swelling caused by moisture. (Paragraphs 0003 and 0007). This enhanced performance is achieved partly by the use of an adhesive material to reinforce the bonding between adjacent layers. (Paragraph 0008). As a result of the improved resistance to moisture-induced edge and differential thickness swelling, the fastener ultimate load performance of the mat is purportedly improved when compared to prior art mats. (Paragraph 0015). The performance of the board was tested using a fastener ultimate load test, conducted according to ASTM D1037 protocol. (Paragraph 0015). The performance was also tested using a concentrated static load test according to the ASM-E-661 protocol. (Paragraph 0016). Among Hsu's examples of lignocellulosic mats is oriented strand board, particle board, and fiberboard. (Paragraph 0003 and 0028).

Claims 3-9 are believed to be allowable, because these claims are dependent on claim 1, which Applicants believe to be in allowable form for the reasons discussed above.

Additionally, claims 3-9 describe the laminated wood piece set forth in claim 1 in greater detail providing further distinguishing features over the prior art. Notably, claim 5 specifies that the laminated wood piece has a screw holding strength of about 400 lbs to about 1200 lbs; claim 8 specifies a wood composite component that is an oriented strand board comprising strands, in which at least 90 wt% of the strands are oriented substantially parallel to the length of the laminated wood piece; and claim 7 specifies that the laminated wood piece has a split resistance of greater than about 1000 lbs.

On page 5 of the Office Action, the Examiner asserts that the elements recited in claim 5, 7, and 8 are disclosed in Hsu. Specifically, the Examiner writes, "Hsu teaches oriented strand board with a screw holding strength of about 400 lbs to about 1200 lbs...[and], a split resistance of greater than about 1000 lbs., where at least 90 wt% of the strands are oriented substantially parallel to the length of the laminated wood piece ..."

Applicants are completely puzzled by the Examiner's assertions that these elements regarding strand orientation, screw holding strength, and split resistance strength are found in Hsu. Hsu makes no mention of either of these parameters. Hsu does disclose performance tests such as concentrated static load test, and the fastener ultimate load test. However, these tests disclosed in Hsu are conducted according to ASTM protocols and do not appear to have any resemblance to the screw holding strength and split resistance strength ranges recited in the present claims. These latter parameters were obtained using tests protocols of the National Wood Window and Door Association. (See Applicants' Specification at paragraphs 0048 and 0051). Additionally, while Hsu does appear to describe a multi-layer lignocellulosic material, Hsu does not specify that the chips and fibers which form these layers should be placed so that at least 90 wt% of the strands are oriented substantially parallel to the length of the laminated wood piece.

If the Examiner insists on maintaining this rejection, Applicants respectfully request that the Examiner cite with greater specificity where the Hsu reference mentions the screw holding strength as recited in claim 5 and specification paragraph 0051, the split resistance recited in claim 7 and paragraph 0048, and the strand orientation recited in claim 8.

Further, even if Hsu when taken in combination with the Edstrom and Buell references disclosed all of the elements of present claims 3-9, which as Applicants have shown above, they do not, the Examiner has not identified any teaching or suggestion that would have motivated a person of ordinary skill to combine Edstrom, Buell and Hsu. In order to combine these references, the Examiner must identify a teaching in the prior art that would suggest the desirability of such a combination.

The Examiner has failed to do this because, simply put, the Examiner has offered no explanation as to why it would be obvious to combine these three references. Hsu teaches

multi-layer lignocellulosic boards. Neither Edstrom nor the Buell references explicitly disclose such a material as far as the Examiner has shown. Even if Edstrom and/or Buell did disclose such a material, the Examiner would still be under the obligation of showing why it would be obvious to combine these references.

Accordingly if the Examiner wishes to maintain this rejection, Applicants respectfully request that the Examiner specifically identify the teaching or suggestion that would have motivated a person of ordinary skill in the art to combine Hsu with the Edstrom and Buell references.

Therefore, based on the above remarks, the Examiner has failed to establish that claims 3-9 are obvious in view of Edstrom, Buell, and Hsu. Reconsideration and withdrawal of the rejections of claims 3-9 are respectfully requested.

CONCLUSION

Reconsideration and withdrawal of the rejection of the claims in view of the remarks provided herein and allowance of the claims being prosecuted are respectfully requested.

Respectfully submitted,

Dated: 21 July 2003

David M. Goodrich
Reg. No. 42,592

J. M. Huber Corporation
333 Thornall Street
Edison, NJ 08837-2220
Telephone: (732) 603-3674
Facsimile: (732) 603-8730